National Aeronautics and Space Administration

Advanced Webinar: SAR for Disasters and Hydrological Applications
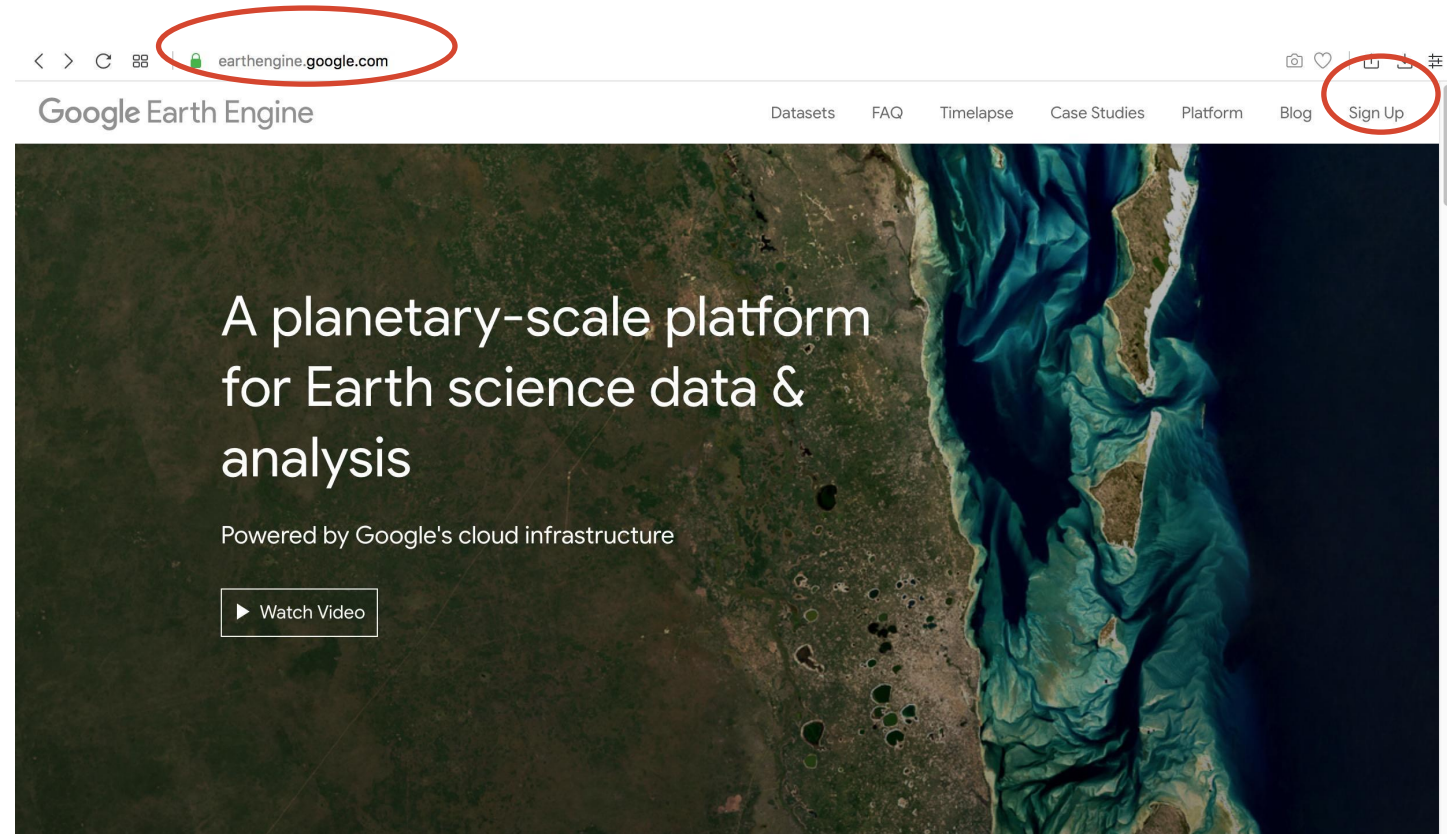
Software

Software

You can follow along with the demonstrations by using the software listed below. Recordings of each Part will be made available on YouTube within 24 hours after each demonstration for you to go through at your own pace.

- **Part One: SAR for Flood Mapping**
  - Google Earth Engine

- **Part Two: Interferometric SAR for Landslide Risk Assessment**
- **Part Three: Generating a Digital Elevation Model (DEM)**
  - For both parts, the trainers will be using will be using Sentinel-1 Toolbox

Part One: SAR for Flood Mapping Using Google Earth Engine

Google Earth Engine https://earthengine.google.com

- Cloud based geospatial processing platform

- Available to scientists, researchers, and developers for analysis of the Earth's surface

- Contains a catalog of satellite imagery and geospatial datasets (including Sentinel-1):

- https://developers.google.com/earth-engine/datasets/catalog/

- Uses Javascript code editor

- Sign up for a (free) account

Meet Earth Engine

Part Two: Interferometric SAR for Landslide Risk Assessment
Part Three: Generating a Digital Elevation Model (DEM)

- **Sentinel-1 Toolbox**
  - A free and open source software developed by ESA for processing and analyzing radar images from Sentinel-1 and other satellites
  - Sentinel-1 Toolbox is part of the Sentinel Applications Platform (SNAP). To install the Sentinel-1 toolbox, you have to install the Sentinel Applications Platform.
  - It can be accessed through the following site: http://step.esa.int/main/download/
  - Include the SNAPHU plugin for SNAP (on a Windows machine you can install it as a plugin instead of a separate installation. Mac users still have to use the separate installation method).
    - http://step.esa.int/main/third-party-plugins-2/snaphu/

Contacts

- ARSET Disasters Contacts
  - Erika Podest: erika.podest@jpl.nasa.gov
  - Amita Mehta: amita.v.mehta@nasa.gov
  - Sean McCartney: sean.mccartney@nasa.gov

- General ARSET Inquiries
  - Ana Prados: aprados@umbc.edu

- ARSET Website:
  - http://arset.gsfc.nasa.gov